Vol. II. INDIANAPOLIS, Ia. AUGUST 1, 1846. No. 15.

EDITED BY
HENRY WARD BEECHER, Indianapolis,
EDWARD J. HOOPER, Cincinnati, Ohio.

S. V. B. NOEL, *Publisher and Printer.*

WESTERN FARMER AND GARDENER.

INDIANAPOLIS, SATURDAY, JULY 1, 1846.

NOTICE.—The P. M. at Greenville, O., says that no Dr. Bancroft lives there. We received this name and the pay thus directed. If any one can tell us where Dr. B. *does* live, if alive atall, we will send him his paper and the back numbers.

WESTERN FARMER AND GARDENER ALMANAC.—We shall in a few weeks issue an almanac for 1847. Our friends, the readers of the Farmer and Gardener, will of course all wish to obtain it, as it will be of the size and type of the Farmer and Gardener, and may be bound up with it.

NEW PUBLICATIONS.

SIDERIAL MESSENGER.—A monthly Journal devoted to astronomical science, conducted by O. M. Mitchel, Director of the Cincinnati Observatory. We regard the whole affair of getting up a well-appointed observatory in Cincinnati, as an absolute marvel. We do not believe that any man except the indefatigable Mitchel would have dreamed of the thing. But it has been done; a fine stone building has been erected, a magnificent telescope procured, and now, behold, a monthly journal of astronomical science! We recommend it to all our science-loving readers. It is published on the 15th of every month, at $3.00, in advance. We have read the whole of this first number with much pleasure and profit, and shall look for the monthly issues with great interest.

THE HORTICULTURIST.—We alluded in a past number, to this then anticipated work. The first number is now before us, containing fifty-six pages of reading matter upon beautiful paper, with clear, new type, got up in every respect in a way which will gratify those who enjoy typographical luxuries.

The contents give promise of a valuable magazine. There are sixteen original articles besides minor editorial articles, and interjected comments. Our expectations were high, but they are more than realized by the promise of this number. All horticulturists who are able, and who do not take this work, will cheat themselves by a discreditable parsimony. It will be perceived that we have largely used this number in making up our own, and thus our readers may obtain an idea of the quality of the Horticulturist.

THE FARMERS' LIBRARY, Vol. II.—We have received the first number of the new volume of this admirable, and now established, agricultural work. We have at various times expressed our

high opinion of the plan on which it is conducted. One half of each number is paged by itself and contains a republication of standard European works on agriculture. The residue of the number is of the nature of ordinary monthlies — editorial, communicated and selected articles. The present number begins the republication of that magnificent work, Stephens's Book of the Farm. The work makes two large volumes at the close of the year, and five dollars cannot purchase one-tenth part the amount of sterling matter in any other direction of which we have any knowledge.

New York, Greely & McElrath, Publishers.

A Lucky Editor. — Well, our turn has come at last; we always thought it would; we had faith; but were getting a little impatient for *sight* too. There was friend Breck getting yard-long cucumbers almost before we had thought of planting; one editor acknowledges strawberries, another a fine mutton or a turkey—some were getting one thing and some another in the way of presents.

Well, on Monday, July 27, who should come to see us but John Jessup, of Moresville, known to everybody in the town who eats cheese, and to sweeten an acquaintance he brought a box of honey—white as snow, containing some ten pounds! Ah those Moresville farmers! they have the name of doing things up in the very best style, and we begin to believe it! If anybody else has proof to present, we are open to conviction.

And now, speaking of honey, the transition to sugar is very natural; and we confess our fault in failing to notice a subscription which we received from James Spray of Bridgeport, last spring, of ten pounds of maple sugar of his own manufacture, which was the most beautiful we ever beheld, and our tongue certainly agreed with our eyes in the verdict.

Wake up, friends! — Where are all our correspondents? Are we utterly forgotten and given over? Come, gentlemen; your harvesting is over now; your trees are budded; the greatest hurry of the year is past, and you have leisure to take your pens again. Now then, tell us what enemies you have fought, not in Mexico, but in your orchards, wheatfields, and potato crops; what facts have you learned, what blunders have you made, what improvements have you found out. We claim all the points of experience as lawfully our own; and we are waiting for the payment of this tribute. You will therefore "please call at the captain's office and settle."

Grapes. — We have received from our friend Mr. Fitzhugh, of Madison, Ia., the loan of a copy of Herbemont's *Treatise on the culture of the Vine.* We have recently given several articles on this subject; but in a few numbers we shall make extracts from this. Our thanks are due to Mr. F. for his kindness.

Insects. — We have received from the author a *Report on the Insects of Massachusetts injurious to Vegetation*, by T. W. Harris of Harvard College. The work is not new, being issued in December of 1841. But it is rarely to be found in the West, The distinguished author has our hearty thanks for this work, now admitted to be superior to anything of its kind in this country. Our readers will receive the benefit of it.

REPROACHFUL NAMES.

"These facts and calculations, with which my valued friend, Dr. Playfair, has furnished me, are curious and striking; and, if they do not fill a man with profound and grateful adoration for what Mather calls the wonder-workings of the Divine Providence, there can be little difficulty in determining, whatever may be his pretensions, *in what class of animals such a being should be ranked.*"*

When crimes and vices are dealt with in highly impassioned and figurative language, we can allow a very base man to be stigmatized as a beast, care being taken always not to do injustice to the beast selected. But in didactic writings, and especially in the plain prose of agricultural essays, we regard these deliberate name-callings, as but a little removed from a practice bad in both genders, whose feminine is *vixenism* and whose masculine is *blackguardism*. We have on that very account been surprised to find so kind-hearted and courteous a man as Mr. Colman so frequently indulging the bad practice. It is thoroughly at fault as a matter of taste, to go no higher for a criterion. All the papers copied, some years ago, his remark that when "a man asked him of what use flowers were, he instinctively looked under his hat to see the length of his ears." Although this was, as ball-players say, a lick on our side, we did not relish it, because it was grossly untrue in its assumptions. Men are not made according to their own wishes. If signally favored with rare faculties, it is no merit in them, nor demerit if they are slenderly endowed. To some is given a nice sense of the beautiful; to others it is almost entirely withheld, and by the same benevolent Creator. Some have an expert hand, some are clumsy in spite of all drilling; some have an exquisite ear for music, while to others all sounds and concords are mere noises. A love of flowers is certainly a desirable taste; and we should rejoice to have every child trained to it, if it does

* *Colman's European Agricult., vol.* II, *p.* 48.

not naturally exhibit such a passion. But if a sober, unimaginative, laborious man, girded to an energetic encounter with the severe toils of life is ungifted with these finer tastes are we to call him an ass, and fumble for his ears? A musician might just as properly stigmatize all who cannot sing; a painter, all who do not sympathise with his art; an antiquarian, all who do not with him love the grim dust of antiquity; and in short every body might shoot out their sharp wit, a little spiteful withal, against everybody else who happens not to be *like them*.

A single remark of this kind would not, perhaps, have required so long a notice. But we perceive that the currency of Mr. Colman's witicism about ears has induced him to issue more of the same coin. The passage at the head of our article occurs in his latest (sixth) Report. And what do you think gives rise to it? A calculation is given of the quantity of *night-soil* taken out of Manchester for agricultural purposes and the quantity of potatoes raised by means of it! Now, says Mr. Colman, in view of these facts and calculations, if it does not fill a man with "profound and grateful adoration for the wonder-workings of the divine Providence, there can be little difficulty in determining, whatever may be his pretensions, in what class of animals such a being should be ranked." This is abominable. If a man following a manure-cart or scavenger's wagon is not seized with devotion, he is a beast! Now we confess that under such circumstances our mind has always had impressions of a widely different character. Nor when we have sought a profound sense of adoration, did we ever dream of attaining it by a solitary contemplation of the power of night-soil in raising potatoes! There is no doubt that there is wisdom in the arrangement by which the even most offensive things become at last instruments of good. Who but an enthusiast, however, would suppose the ulterior design of ashes, muck, and manure to be such a direct and immediate exciter of devotion that he who does not draw such inspiration from them is an "animal?" Young says that an "undevout astronomer is mad;" but we think in this case that a devout agriculturist is madder yet.

We pray not to be misunderstood as finding fault with any mortal soul for devotional tendencies; nor as ridiculing an admiration of the fitness of things even in the humblest processes of nature. We behold with gratitude that down to the least and lowest of the details of nature "all is good." Had Mr. C. contented himself with a simple expression of admiration for divine beneficence where we should be least likely to have looked for it, every one would have sympathised. But when he singles out so unusual an altar for our devotions as these unseemly fertilizers afford, and in default of worship threatens not only to excommunicate but to cast us out of our race, and put us among animals, we think that his agricultural religion is quite too strong for his politeness, his justice, and we may add, for his usual good sense.

We may seem to notice these things with too much particularity. But Mr. C's work is designed to be a classic. It is issued under auspices which will make its example in this respect authoritative and contagious.

We notice in other and very high quarters a strong propensity to introdnce into agricultural periodicals the querelousness and bitterness which are usually found in unsavory politics. Bitter jibes at our government, railings at other callings of society, sharp speeches about the injustice of things toward farmers, and, in short, a grumbling, crusty, snarling tone which we think ill becomes any cause, but least of all the cause of agriculture.

THE NURSERY BUSINESS.

The great interest in the cultivation of fruit which has been excited within a few years, has given rise to many nurseries to supply the demand; and every year we see the number increasing. Or rather, we see new adventurers in this line, for the failure of many and the abandonment of the business, prevents the number from becoming so great as one would suppose.

We are very glad to see the art of fruit culture increasing; and we are very glad to see competent men embarking in the nursery business. But we are sorry to see the impression gaining ground that it is a business which any body can conduct, and that every man can make money by it who knows how to graft or to bud. Let no man embark in it under such misapprehension.

In the first place, the time and labor and patience required for a successful nursery-business is much greater than any one suspects beforehand. If a man has a large capital he may begin sales, at once, upon purchased stock. But if one is to prepare his own stock for market, and this must be the case with, by far, the greatest number of western nurserymen, it will require several years of expensive labor before he can realize any thing. Nor, even then, will he be apt to receive profits which will at all meet his expectations. During these years of preparation, on what is he to live? If he has means, very well; but let no man suppose that he can get along, especially with a fami-

ly on his hands, during the early years of his nursery, if he has nothing else to depend upon. The mere physical labor of keeping a nursery in proper order is such as to make it no sinecure.

But all this is a less consideration than the special skill and vigilant care required to conduct a nursery in an honorable manner. No where do mistakes occur more easily, and no where are they more provoking, both to the buyer and seller. It is rare that assistants can be had upon whom reliance can be placed. There are men enough to plow, and grub, and clean; but to select buds and grafts, to work the various kinds and plant them safely by themselves, this, usually, must be done by the proprietor. Where a nursery is carried on by assistants, it makes almost no difference how much care is used, mistakes will abound.

The extent to which an error goes, is not unworthy of a moment's attention. We purchased of a very highly respectable nurseyman, of Ohio, the *Royal George* peach. The first season many buds were distributed from it. An expert nurseryman, in the vicinity, among others, got of it. The credit of the original proprietor of the tree was such that it was thought safe to propagate at once, and thousands of trees were worked with these buds; from him, nurserymen from neighboring counties procured scions, and now the Royal George—which has proved to be no Royal George at all—is scattered all over Indiana. When a nursery contains from fifty to a hundred kinds of apples—thirty or forty kinds of pears—ten to twenty sorts of cherries—thirty or forty kinds of peaches—besides plums, nectarines, apricots, &c., there will be some two or three hundred *separate varieties* of fruit to be propagated each year, and of each sort from a hundred to a thousand or more trees, according to the business of the nursery. Two things are apparent from this view; first, that such unremitting and sagacious vigilance is required that not every one is fit to be a nurseryman; and, secondly, that not every nurseryman is a scamp who puts upon you trees untrue to their names. No doubt there are roguish nurserymen; no doubt, too, there are culpably careless men in this, as in all other forms of business. But no one will be so charitable to nurserymen as those who understand the difficulties of their business; and a mistake, and many of them, may occur in well appointed grounds which no care could well have prevented.

We think this to be a business to which no man should turn, except under two conditions; first, that he will, if he has not already, serve a faithful apprenticeship to it—we do not mean by regular indenture, but by practicing for several years in a good nursery until the prominent essential parts of the business have become practically familiar.

The other condition is, that he make up his mind to *see to it himself*.

LAYING DOWN LAND TO GRASS.

ORLEANS, Ia., July 22d, 1846.

Mr. EDITOR—I am a young farmer and wish some help through your excellent paper. Will you or some of your correspondents give me the best manner of sowing a field (wheat stubble) down in blue grass and clover, to make a good pasture the first season—at what time of the year should the seeding be done?

Will orchard grass afford better or as good and early pasture as blue grass? If so, give the time and manner of sowing.

I have been waiting patiently for "J. T. P.'s" plan of a harrow, before I made my own. Will he give it in time for this fall's seeding?

J. F. K.

We shall speak of the kinds and quality of seed, and of the time and manner of putting them in.

We think our farmers err in not sowing enough kinds of seed together.

The objects to be secured are, very early grass in the spring, a heavy body of hay, a rapid after-growth, and the greatest amount which the soil can yield. No one grass can be found capable of meeting all these ends. Some are very early, but not heavy enough or sufficiently nutricious for the main crop; others are admirable for hay, but do not start readily again after cutting. By judiciously mixing different sorts of grasses any one of these objects may be secured and the meadow be admirable both for the scythe and for pasturage. Nor can the soil be made to yield all of which it is capable in any other way; for a square foot of ground may be able to sustain but a certain number of roots of any *one kind* of grass, and yet many support, in addition, as much more of another kind; since different species of grass draw their nourishment from different portions of the soil—the fibrous rooted grasses from the surface, and tap-rooted plants from the lower strata of the soil; while broad-leaved vegetation, as clovers, lucerne, &c., draw very much of their support from the air. Indeed, this is the lesson which nature teaches us, for a dozen kinds of grass may oftentimes be found growing wild on a single square foot.

The English farmer sows from four to seven or eight kinds of grass seed, and sometimes as high as twelve or fourteen, each one of which is destined to answer some special end, and the whole taken together constitute as it were, a perfect grass.

We subjoin the quantity and kind of seed per aker recommended by English authorities, that our readers may have an idea of the English meth-

od, and derive such benefit from it as their circumstances will admit of:

Smooth-stalked poa,	8	quarts.
Rough-stalked poa,	8	"
Meadow fescue,	12	"
Meadow fox-tail,	8	"
Crested dog's-tail,	6	"
Rib-grass,	4	"
Timothy-grass,	4	"
Yellow oat-grass,	4	"
Perennial rye-grass,	12	"
Cock's foot,	4	"
Yarrow,	4	"
Sweet-scented vernal,	2	"
White clover,	6	lbs.
Cow-grass,	4	"

and annual meadow-grass.

The following table exhibits the quantity of seed, by *weight*, and also on three kinds of soil:

FOR PERMANENT PASTURE, PER IMPERIAL AKER.

	Light soil.		Medium soil.		Heavy soil.	
	With a crop.	Without a crop.	With a crop.	Without a crop.	With a crop.	Without a crop.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
Perennial rye-grass	12	24	12	24	12	24
Meadow fox-tail	14	28	2	4	34	64
Timothy-grass			14	3	34	54
Meadow fescue	24	4	24	4	24	4
Cock's-foot	5	8	34	64	24	4
Rough-stalked poa			14	34	34	64
Smooth-stalked poa	34	64	5	8	5	8
White clover	5	8	14	24	14	24
Red clover	14	24	14	24	14	24
Hop-clover, or trefoil	14	24	14	24	14	24
Cow-grass	14		14		14	
	33¾	60¾	36	63¾	36¾	66

These seeds may, for the most part, be had of Eastern dealers, though not, probably, in the West.

We suppose "J. F. K." wishes both hay and pasturage,—at any rate he would not object to grasses which will permit the scythe, without being any the less excellent for pasturage.

With blue grass we should join orchard grass, say a bushel to the aker, white clover, five pounds, red clover ten pounds, and sweet-scented vernal, (*anthoxanthum odoratum,*) say three pounds.

This last grass is remarkably early in the spring, and peculiarly fragrant; indeed, it is supposed that the famous spring butter of Philadelphia derives its peculiar flavor from this grass, and we should include it in every mixture to be sown for pasturage. The orchard grass is one of our most valuable; for hay it may be inferior to timothy; but it is decidedly superior to it for pasturage. Col. Powell, of Pennsylvania, after growing it ten years, declares that it produces more pasturage than any cultivated grass he has ever seen in America. It should be spread on a floor and sprinkled with water a day or two before sowing, it being very light, not weighing more than twelve or fourteen pounds to the bushel.

There is a very great difference of opinion respecting the quantity of seed to be sown to an aker. There can be no doubt that the question is to be settled by the character of the soil and climate. In soils and under circumstances where every seed will vegetate and grow off with unobstructed vigor, less seed is needed than where a part will be taken by frosts, a part by drenching rains which are not well drained off, and a part by severe drouth. Every farmer must employ his best judgment in this matter; but, it is better to err on the side of too much than of too little seed.

Time of Seeding. We cannot pretend to decide between the conflicting opinions on this subject. The positiveness of those who prefer spring-sowing is only to be equalled by that of those who prefer fall-planting. Young says of the month of August, "this is the best season of the whole year for laying down land to grass, and no other is admissible for it on strong, wet, or heavy soils." This, however, is said of humid England. But if the character of the season toward the close of summer favors, there can be no doubt that fall-sowing will advance the crop very early the next year, in all soils where it is not liable to be thrown out by the frosts. If the winter proves severe it will be prudent to add an additional quantity of seed in the spring. It is objected to spring-sowings, that the grass is grown in the shade during the early part of the summer, and is, of course, *tender*, so that when the grain is cut, it is enfeebled by the powerful heat, to which, then, it becomes exposed. On the whole, we are inclined to prefer the month of September, if the season favors, to any other for sowing grass seed. Since writing these lines one of our best farmers informs us that he prefers August to any other month.

Method of Sowing. The ground should be very thoroughly prepared by deep and fine plowing, and

the want of labor in this respect is want of economy.

If the soil is naturally well drained no further provision against wet will be required. But if it be flat, it may be well to lay it off into lands, strike a furrow through the center, and then turn the furrows toward the outer on each side. This will give a slight elevation at the middle and a drain between each land sufficient to answer the purpose of moderate surface-draining. The seed should be sown with the greatest *eveness* possible. The English farmer prefers to sow some of the kinds separately on this account; for although he has to sow the whole ground several times over, experience has taught him, as it will us, that that is the cheapest which is done the best. Let it be covered in well with a harrow, and not with a bush, which last leaves the soil dead, and tends to drag the seed into patches and hollows. As a general rule grass seed may be planted as deeply as grain. Farmers lose much more seed from shallow than from deep planting. For although shallow-planted seed vegetate sooner, they are more liable to be winter-killed, or to perish by drouth than those which are deeply covered.

SLITTING THE BARK OF TREES.

Some time ago we threw out some suggestions respecting the practice of slitting the bark of trees. The article has been extensively copied, but we have seen no reply to it until within a few days. A writer signing himself "P." attempts to defend the practice in the twelfth number of the FARMER'S CABINET. We extract by paragraphs all that is said upon this subject. If the separate paragraphs are read connectedly without stopping for interjected Editorial matter, the reader will have the article in question just as it stands in the Cabinet; we have separated it into paragraphs not to break its force, but for the facility of fitting the reply to the exact thing replied to.

Mr. EDITOR—In a late number of an agricultural paper is an article ridiculing the practice, time-honored as it is, of slitting the bark of fruit trees to render them healthy and fruitful. The writer remarks that he would as soon think of slitting the skin on a boy's leg to make them grow, as the bark of trees.

This comparison is more witty than just. If the circulation of blood was confined to the inner coat of the skin, and if the interior skin kept accumulating by successive annual layers until it reached the thickness and solidity of sole-leather, then such practice might be very useful.

It is true that the outer bark of most fruit trees run with its greatest strength directly around the tree; and thus when a number of dry and hardened coverings have accumulated, forms a powerful obstacle to the expansion of the interior wood, and presses so hard upon the circulating portion of the bark as greatly to obstruct the movement of the juices.

The writer designed the 'comparison' to be a mere illustration of what seemed, to him, the absurdity of a practice. It would have been a poor analogy, but was sufficiently good as an illustration.

That successive depositions of bark become hard, 'forming a powerful obstacle to the expansion of the interior wood,' and pressing 'so hard upon the circulating portion of the bark as greatly to obstruct the movement of the juices,' is a question nad f, mere *fact*. We have asked the proof all that "P." attempts to give, is a statement of the *way* in which he conceives the thing happens.

Now we doubt the whole process. If it *does* occur, the method proposed by "P." is good enough. But we do not believe, nor has he apparently made any experiments or observations which go to prove that such a state of things actually occurs.

He then proceeds to show that tight bark would be a sufficient cause of evil—a thing not doubted.

Such, I say, may be the case, when these annual coverings have accumulated from any cause, and to satisfy ourselves on this point, we have only to observe the effect of the yarn, or slip of bark, or matting, with which the limb of a tree is bandaged or tied, in the process of budding, which, if not timely removed, will, by the expansion of the wood, come to press so hard upon the interior bark as to ruin all. This effect is produced, we see, by a simple woollen yarn. How much more powerful must be a series of coatings of bark wrapped around just like this bandage.

There is not a shadow of doubt that rigid, and inelastic, *fixed* bark would injure a tree. There was no need of any illustrations or analogies for so simple a matter. A cast-iron case about the trunk; a coil of wire from root to crotch; or a bark as inert, and dead as either, would do mischief enough. But the question is simply this, upon what fact do you *base a statement that the bark becomes thus?* We do not deny the fact. We shall receive it promptly if proof is afforded. But in the absence, thus far, of all proof, we stoutly deny the right of a Phytologist to base a theory upon hypothetical facts.

Next, he considers an objection to his theory.

It is said that nature provides for the removal of these outer coatings as rapidly as is necessary. So she does, in general, but not in particular diseased states of the tree. It might as well be said that nature provides for everything necessary to the growth and pertection of trees, fruits and vegetables; but we find on the contrary, that they require our constant care and supervision. Their diseases must be looked to and remedied, as in the

human subject, or both will soon be beyond the "reach of surgery"—and this is one of those diseases.

All this is very well; quite true, and entirely aside from the point.

But now we begin to have some proof exhibited.

The voice of ages has pronounced it such, and slitting is the remedy which has been applied. And I would here assure the writer before alluded to, that where he finds a custom sanctioned by universal practice, he may be sure there is something in it.

It may be presumed that no practice would become universal that was plainly pernicious. But it is quite possible for a merely useless practice to become universal. What says our friend to the practice of planting, setting fences, and conducting other rural labor by phases of the moon? We have not reverence enough for the 'voice of ages' to take its statements in the absence of all other proof.

What evidence there is for the reasoning in the following, we know not. It does not accord with our views as to the reason of the benefits of lime.

Others may apply a different cure for this disease, and sometimes unconsciously. Whitewash applied to the bark of trees, acts, there is no doubt, more beneficially, by softening and removing the superfluous integument, than in any other way.

Insects and eggs are supposed to be destroyed by lime, and the wood cleansed of all sourness by its alkaline property. This, we think, ends the benefit of lime. We regard it as only secondary in usefulness and objectionable to the sight. Nothing is so unnatural as whitewashed trees. It always makes us think of the picture, not unfrequently seen, of a monkey painting his tail sky-blue, and saying "neat, but not gaudy."

We have no remarks to make upon the following:

Where the direction of the greatest strength of the bark runs vertically, as in most forest trees, this disease called *hide-bound*, is not likely to occur; as the bark readily splits into seams, and thus accommodates the increased size of the wood until it is finally loosened and falls off. In the sweet-gum, the obstinacy of the bark in the latter particular, is curiously exemplified. I have one growing, which is not thicker in the wood than my finger, but the bark is at least four inches in circumference, and channelled with deep seams extending in nearly to the wood, and passing up spirally like the thread of a very quick screw.

But to his experience, which follows, we have this to say—that it proves nothing.

Now as to my experience in the slitting of the bark of trees. On coming to the place where I now reside, four years since, I found several plum and quince trees which were but cumberers of the ground, as they produced no fruit to glad the eye or the taste. They had received all the ordinary attention of pruning, digging, &c. From the appearance of the trees I was induced to try slitting at once; which was performed freely on the branches as high as I could conveniently reach, to the ground—say three or four incisions to the tree. These incisions are now filled with one inch wide, each, of new bark. This, with the further ordinary treatment, has brought the trees into full bearing, though in the case of the plums, unfortunately the depredations of the curculio have hitherto prevented any of the fruit from reaching maturity. This experiment in slitting, has satisfied me of its utility. While writing, I will say that I have this year, however, the prospect of enjoying some of the fruits of my labors; as by removing one of the largest plum trees from the garden to the ground to which the poultry has free access, the young fruit has been less molested, and I expect in another year will entirely escape; as when the fruit falls, the grub is industriously sought and plucked out by its natural enemy, the feathered tribe—in this case the poultry.

He slits his trees, and then says "This, *with the further ordinary treatment*, has brought the trees into full bearing"! This is a famous mode of experimenting. Two or three causes are acting, but all the effects are attributed to *one* of them. We give up. We ourselves have not the least doubt that slitting the bark will be useful upon hide-bound trees when accompanied "*with further ordinary treatment*," i. e., we presume, with digging, scraping, working, and manuring!

SUCKATASH, or CORN AND BEANS.

Last summer we set forth a recipe for cooking tomatoes, which went the rounds of all creation, i. e. of the newspaper creation; and doubtless many are at this time regaling themselves upon the dish with secret gratitude to him who gave them the hint for its preparation. We now extract from our kitchen another private dish—the far-famed yankee *suckatash*. We give directions for a mess sufficient for a family of six or seven.

To about half a pound of salt pork add three quarts of cold water and set it to boil. Now cut off three quarts of green corn from the cobs, set the corn aside and put *the cobs* to boil with the pork, as they will add much to the richness of the mixture. When the pork has boiled, say half an hour, remove the cobs and put in one quart of freshly-gathered, green, shelled, beans; boil again for fifteen minutes; then add the three quarts of corn and let it boil another fifteen minutes. Now, turn the whole out into a dish, add five or six large spoonfuls of butter, season it with pepper to your taste, and with salt, also, if the salt of the pork has not proved sufficient. If the liquor has boiled away, it will be necessary to add a little more to it before taking it away from the fire, as this is an essential part of the affair.

COMMUNICATIONS.

LETTERS OF A COSMOPOLITE---NO. 11.

PHILADELPHIA, July 4, 1846.

Independence, seventy years ago, would never have survived its birth, if the day had then been a wet and sultry as is to-day, and as has been now for five weeks continuously in this city. The patriot signers could never have deliberated in such weather — they would have wilted down to nothing; and as for taking any daring step or showing any courage, they could not while it was oozing out of them drop after drop and their fears for their own safety, lest they be parboiled in the heat and vapor of the day, were well grounded in present sensations.

You see, sir, that I have taken a roundabout way to tell you a simple matter, that this "glorious fourth" has put people into a steaming stew—turned to crackers into sissling squibs — the soldiers into piles of drooping finery; quenched out all patriotism and cannon—muddied the boots and riled the tempers of the citizen fops; put an end to balloons, processions, picnicks, parades, fires and foolery, and we spend the hours quietly at home, interupted now and then only by a weak squiz-z-ze that some desperate patriot has set off in hopes of making a *pop*. No use. We are all drowned out and driven in. *Moral*: What is the use of that national ardor that rain will put out, or of the national festival that can't go off without dry powder?

But aside from the evils above mentioned, the crops for miles around this centre are suffering immensely; thousands of tons of grass are lying cut and partly cured, exposed to this merciless drizzle, while wheat, that is here just ready for the sickle, is bowed down to the ground through the extremity of that which it suffers; a few more days of such rain will do incalculable injury to the farmers of this neighborhood.

How trying it is to the farmer and sailor to be so dependent upon the fickle wind and weather, to labor under such a changeable dynasty, whose *acts* are obvious, but whose principles and constitution are as dark as when centuries ago we hear "the wind bloweth where it listeth." Nevertheless, I, for one, am such a faithful believer in the efficacy of scientific research, that I believe that ultimately the seal of obscurity will be moved from this matter and our almanacs will foretell showers as they now do eclipses, and our philosophy will teach us how to avoid their ill effects; as we have long since learned to withstand *cold*, by fire, and make our winter's preparation, so shall we one day say "the rain cometh, we must prepare — what?

The practical turn that all research is now taking augurs the brightest results to the future, and I know of no class of men so soon and effectually to be benefitted in various ways, as they who plow the great deep, and their supporters who plow deep the great land.

There is, however, a danger in connexion with this course of improvement, that is obvious. I refer to the fact, that, when the immediate anticipations of men are highly raised, they always become impatient of the necessarily slow progress of knowledge, and are inclined to throw discredit upon, and lightly esteem, important but unfinished discoveries.

To see what has already been done for agricultural science by the arduous closet labors of learned men, we must look, not to the West, where all products are, as it were, spontaneous, and where aid is hardly necessary, or improvement possible, so profuse is nature at the outset and so persevering in her self support; but we may look and receive our answer fully and satisfactorily, at the older and naturally poorer countries, whose resources have been so vastly increased within the last few years, by thousands of acres of wild land reclaimed upon *scientific principles*, thousands, of worn out land rēinvigorated, and mountains of usually wasted material, turned to good purpose and transferred thus from the account of "*Loss*" to the more equable page of "*Stock available.*" New England shows it somewhat in her improved barns and yards; her artificial manures, and her scientific economy. Virginia shows it in the successful efforts that are now making to renew her deserted places, and rēestablish her agricultural prosperity. Although the morning has but just begun to dawn, yet there is light enough to see good things, and make us rejoice in the coming day, when *all* farmers will become 'book-learned;' when plows, hoes, and harrows will be mechanically correct; barns and houses comfortable and economical, stock of all sorts systematically improved; fruit, vegetables, grass and grains driven to their utmost richness and fruitfulness, and where everything that man can find on the earth will be found to have a use, and be put to its work in the best manner.

So mote it be.

But I am writing a letter, let me not forget myself and usurp, Mr. Editor, your place as exhorter and essayist.

What say you, sir, and your patient readers, to the announcement that this present, is probably the last of the dull letters that come from your sometime correspondent "Cosmopolite" no longer; my letters cease with my wandering, and though occasionally a paragraph may come along from me, as topics suggest themselves, yet as a regular contributor, I am done. My corner in your choice little sheet, I give up to you, to fill with better things than the hasty thoughts of a careless writer.

Since my letters began, I have visited fifteen States of our twenty-six, and have spent some little time in each. I will not ape the foreign tourist and pronounce an opinion with a judge's gravity upon matters that I confess I know nothing about, but I'll talk as the women do, (bless 'em) and say, that of all these States, I like the sisters Ohio, Indiana, and Illinois the best. Why? Because! "A life in the west for me," whether as a farmer, preacher, mechanic, or lawyer, tradesman, or doctor. Hurra for the valley—the garden of the world—the present heaven of farmers; the land of green leaves; green ponds; rich valleys, and chills!

Friends, good bye.

T. K. B.

IN ADVANCE OF PUBLIC OPINION.—Thinking more of yourself than the public thinks of you. How few are free of this weakness.

MANURE FOR PARTICULAR CROPS---ENQUIRIES.

HERMITAGE, July 2d, 1846.

Dear Sir:—I have commenced the cultivation of a variety of fruits and flowers, and am at a loss about what kind of manure will be best suited to each. Will you do me the favor (and no doubt many of your other subscribers) to insert in your very useful paper a somewhat extended article on "special" manures, that I may know what is best for my apples, peaches, cherries, pears, plums, grapes, both native and foreign, gooseberries, strawberries, raspberries, roses, dahlias, &c.

I am inclined to believe that there is some truth in the homely old adage, when applied to the vegetable as well as the animal kingdom; "What is one's meat is another's poison." If this be true, I may have killed some of my finest varieties of fruit by the indiscriminate application of the same manure.

To ascertain the specific ingredients or component parts of a manure, best suited to the growth and perfection of each fruit and flower, would it not be necessary, to give the analysis of each after being reduced to ashes? My vinyard is planted in a light sandy loam, (which Mr. Longworth says is not good for grapes) from necessity. If he is correct, how can I make this soil more consistent or tenacious? Will the application of lime, ashes, and clay, either separately or conjointly, answer? If conjointly, in what proportions? You say in one of your recent numbers, that you have received a valuable pamphlet from N. Longworth, on the culture and management of the grape, making wine, &c., and promised to give copious extracts from it. I hope you will soon redeem that promise. I have about fifteen varieties of native and European grapes, but will rely chiefly on the Catawba for wine?

Can I, in this latitude, hope for sufficient success, with the fine European varieties to justify open culture? If not, will I be warranted, living remote from any city, in the construction of a vinery on a cheap plan? You will, no doubt, take pleasure in bringing to our notice, every new variety of fruit which has been well tested and found to be of superior quality.

Can the cranberry be propagated from the seed? If so, how prepared, and when? But if not, please tell me how I can best procure some vines, with which to commence an orchard.

D. CREEL.

We give, in another column, an article on the subject of cranberrry cultivation. The enquiries respecting manures &c. are too extensive to be answered in any other way than by the continual expositions of an agricultural paper. But if our friend will procure Leibig's Agricultural Chemistry, and also Johnston's, he will find the whole subject of manures treated in the most thoroughly scientific and practical manner. Downing's Fruit and Fruit Trees of America will afford him the best information respecting the special cultivation of fruit trees.—*Ed.*

Hope on, and *work* on, and success will follow.

FLAX.—*Sir:*—Having seen in your paper of last spring an account of the Irish method of growing flax, and the practice of some few individuals in this country I was induced to sow part of a field; and I now wish to know if the flax as well as the seed can be profitably disposed of in Cincinnati or neighborhood; whether it can be disposed of in its raw state, or whether it would be necessary to rot it; also, the probable price a pound, which it would fetch.

The flax will hardly sell in a raw state; if well dressed we presume it would find a ready market, but at what price we cannot say. The seed will hardly be profitable this season. The manufacturers of oil have either lost or but scarcely saved themselves. We perceive that oil has been as low as fifty cents per gallon, and probably fifty-five to sixty cents will be the highest. The average price paid for flax-seed we will put at ninety-five cents; at which we think it must have been a losing operation.—*Ed.*

GRAPE CULTURE.—"I have heard a number of people say, that the reason why they did not cultivate the grape in this part of the country, was on account of the uncertainty of its crop. Now I have proved by experience, that the grape can be cultivated in this northern latitude, and produce an abundant crop every year. The operation is simply this: If it so happens that the frost kills the grapes in the spring, take a sharp knife and with it divide the growth of the present spring from that of the former year, close to the old wood, and as soon as they recover from the shock of the frost, they will again produce buds, branches, and grapes, my vines in the spring of 1845 had bloomed and set their grapes and the frost killed them. I performed the operation above named upon them, and the result was an abundant crop of grapes. J. P. A.

Springfield, Ia., 1846.

BOTTS, SWEENY AND GALLS.

MACK'S HILL, near Reading, O.,
July 24, 1846.

I have seen a number of horses cured of the botts with spirits of turpentine, when to all appearance the horse would have died—dose half a pint. I once saw three half pints given to a horse that was not able to stand—it was done as an experiment. In less than three hours the horse was hitched to the wagon and drove off, showing no symptoms of the botts. *Nux Vomica* is said to be a very poisonous substance: take one of the beans, grate it, put it in sweetened water, and drench the horse. A gentleman that I have seen use it, says he has used it for thirty years and never had it to fail but once.

The Sweeny can be cured if taken in time: Take hold of the skin of the shoulder where it is affected with both hands, and pull till it breaks, or at least till the skin is pulled loose from the shoulder; then take hold at another place, and so all over the shoulder: pull till you are tired, if the horse will let you: repeat it several times a day, for several

days: after pulling, give the shoulder a thorough rubbing with a round stick or your hand.

Galls. The best thing I ever tried, was to wash the galled part with hard soap and cold water. After giving it a good rubbing take clear water and wash all the soap off and rub it dry. All oily substances should be avoided if the horse is used; it will make it worse. The washing should be done when the horse first stops, that it may dry before he starts again. Washing a horse's back or shoulder and starting him on the road while it is wet makes it worse.

JOSEPH MCHANNON.

JUST PRIDE.—Our friend S. W. Parker, has sent us from Fayette county, within a few weeks, fifty-six subscribers. We extract a few lines from Mr. P., touching the merits of old Fayette, and heartily wish we had more such counties. This is the kind of pride which we love to see and to cherish.

"To thus aid you in the circulation of your invaluable publication, in Fayette, gives me as much pleasure, as it can you. We have yet much to do before we are what we should be; but I flatter myself we have *now* the best county in the State, for its size! We have a fine canal threading the county, north and south, along as about as pretty a valley as the sun shines on; giving us the Ohio River market at two points. Our lands are rated higher per aker for taxation than those of any other county in the State, and with one exception, $2 50 higher. And still in the *clean* payment of our taxes, we do that thing up much nicer than any other county! our delinquency being only $3.03 to the $100.00. (See State Auditor's last report.) We take it that these *are* things to brag of. I hope we may also soon be able to boast of our agricultural society."

SELECTIONS.

CULTIVATION OF THE CRANBERRY.

Moisture is indispensable to the cranberry.—The soil for it should be loose and porous; there should also be an abundant supply of water, accessible at all seasons. Take a sandy soil, that is so situated, that it may at all times have water conducted upon it, and you may raise cranberries to any extent. If you have boggy grounds just cover the surface with sand. The vines are to be set out in drills about two feet apart. Two or three upright stalks are set together, and placed from six to twelve inches apart in the drill. The easiest and least expensive cultivation of the cranberry is on wet sandy barrens. It is not every wet spot, however, that is suitable for cranberries. The soil must be sand, mud, peat, or a mixture of these. The ground may be saturated with water from springs, running streams, or from the drainings of higher lands.

It is stated by experienced cultivators, that cuttings from any part of the stem will strike root, which will save labor and expense where it is difficult to procure roots. Cranberries may also be sown: though there have not been known to be many experiments of sowing the berry. We have seen an account of one made in the eastern part of our State, which was successful, and the ground became thickly set with vines. The spring is supposed to be the best time for setting vines. During the first season, vines often put forth runners several feet in length. The next year upright stems spring from these runners, which produce new vines the third year. The vines do not usually cover the ground before the fifth year.

Manure is worse than thrown away on the cranberry vine. Any vegetable or animal matter, that produces fermentation is injurious. In general, the more barren the surface-soil, the better. The growth of grasses, weeds, &c., in such spots is feeble; and the cranberry vines kill out all such vegetation, as its nourishment comes from water and the atmosphere. It is well however, to pull out the grasses, &c., as they appear: bushes of course must be carefully eradicated.

One hundred and fifty bushels of cranberries from an acre are regarded as a *good crop*, where the vines have been set five years. Mr. Sullivan Bates of Bellingham, in this State gathered nearly 400 bushels from an acre in one season. Mr. Bates's cranberries are of uncommonly large size, and were obtained by transplanting from low grounds to high. He plants in drills, twenty inches apart; in hills, seven inches.

The account we have given of the mode of cultivation, &c., of this valuable berry is derived from the abundant experience of the farmers of Barnstable county. It would seem that some cultivators do not regard moisture as so indispensable to the thriving of the plants.

Dr. Underhill says that the cranberry *probably* improves in *all* respects by the transfer from marsh to upland. Wild grapes, he said, delight in alluvial wet positions; but their flavor is not to be compared with those growing in dry soils.

At all events the soil for the cranberry must be porous; one that bakes will never answer. We rely very much on the experience of the Barnstable farmers. Experiments can be easily made, and at very little expense. We hope that some of our farmers will be induced to try them, and make the result known.

☞ We copy the above from the Springfield Republican, and consider the statements correct. Cranberries are in our own meadow now (July 5th) in full blossom; these are as handsome as many flowers that are cultivated merely for show. Our meadow is not very wet or cold, but we can keep it as wet as we please. We intend to try sand on a part of it. Sand is good on a peaty bottom, though we should not venture to put on a thick covering for fear of introducing moss.

Mass. Plowman.

A PREVENTIVE TO THE MILDEW IN THE GOOSEBERRY.

Almost every body is discouraged with trying to raise the Gooseberry in this country, on account of the *mildew* or *rust*, which destroys the fruit. I have made a good many experiments for the last fifteen years, to find out, if possible, some simple mode of preventing this, but entirely without success, until three years ago, I hit upon a mode which has given me great satisfaction in growing this fruit.

My mode of preventing mildew, is very simple. It consists in covering the soil under the bushes with salt hay about three inches thick. This should be done early; say when the blossoms begin to open. Whether it acts as a shield to preserve the roots, and thereby the whole system of the plant, from the sudden changes of weather, which the scientific say bring about the mildew, or whether it acts as a stimulant, I am not able to say.* It is sufficient for me that I have never had the least appearance of mildew under the bushes which I have treated in this way, since I began to apply it; while others in the same garden have been totally covered with it. I leave the salt hay on all summer. By autumn, it is pretty well rotted, and I then dig it in, and it promotes the growth of the tree next year.

If you think this simple mode of preventing mildew, which I have found so successful, will interest your readers, I shall be glad to have it made public in the Horticulturist.

Horticulturist. NEW JERSEY.

* The salt does not, we think, act *specifically* in preventing mildew; as we have tried it, spread upon the soil, with no effect. Yet we have heard such good accounts from several persons this season, of this very mode of using salt hay, that we think very favorably of it, and recommend it for trial.

HOW TO RAISE "GIANT" ASPARAGUS.

About the 1st of November—as soon as the frost has well blackened the Asparagus tops—I take a scythe, and mow all close down to the surface of the bed; let it lie a day or two, then set fire to the heap of stalks; burn it to ashes, and spread the ashes over the surface of the bed.

I then go to my barn yard; I take a load of clean, fresh stable manure, and add thereto, half a bushel of hen-dung; turning over and mixing the whole together, throughout. This makes pretty powerful compost. I apply one such load to every twenty feet in length of my Asparagus beds, which are six feet wide. With a strong three pronged *spud*, or fork, I dig this dressing under. The whole is now left for winter.

In the spring, as early as possible, I turn the top of the bed over lightly, once more. Now, as the Asparagus grows naturally on this side of the ocean, and loves salt water, I give it an annual supply of its favorite condiment. I cover the surface of the bed about a quarter of an inch thick with fine packing salt; it is not too much. As the spring rains come down, it gradually dissolves. Not a weed will appear during the whole season. Every thing else, pig-weed, chick-weed, purslane, all refuse to grow on the top of my briny Asparagus beds. But it would do your eyes good to see the strong, stout, tender stalks of the vegetable itself, pushing through the surface early in the season. I do not at all stretch a point, when I say that they are often as large round as my hoe handle, and as tender and succulent as any I ever tasted. The same round of treatment is given to my bed every year.

I have a word to say about *cutting* Asparagus, and then I am done. Market gardeners, and I believe a good many other people, cut Asparagus as soon as the point of the shoot pushes an inch or two through the ground. They have then about two inches of what grows above ground, and about four or six inches of what grows below. It is as tough as a stick; and this is the reason why people, when it is boiled, always are forced to eat the tops and leave the bottom of the shoots on their plates.

My way is, never to cut any shoots of Asparagus below the ground. Cut it as soon as it has grown to proper height, say five or six inches above ground. The whole is then green, but it is all *tender.—Horticulturist.*

TO DESTROY SLUGS.—"We strongly advise all who are attacked by slugs to try the effect of lime water,* which does not at all injure any crop, and immediately destroys the animal. To make the application efficient, it is, however, necessary to use it late in the evening and very early in the morning, say at day-break, when the slugs are feeding. A couple of applications of lime-water has completely exterminated legions of slugs under our own eyes."—*Lindley.*

A correspondent of the Chronicle adds from his own experience: "The following mixture will kill slugs; gas water, 1 gallon; water, 6 gallons; lime, as much as it will take up. This beats plain lime-water or gas water."

* Lime-water is made by throwing a piece of quick lime of the size of one's fist into a pail of water. When it is dissolved, let it stand for some time to settle, when the clear water should be poured off and is ready for use.—*Ed. Hort.*

LONDON HORTICULTURAL SOCIETY.—The last (May) exhibition of this Society is represented as "perhaps the best that has ever graced the garden." The day was very propitious, and the gardens were thronged with four thousand eight hundred and forty-four visitors, including Prince Albert. "As for the flowers," says Dr. Lindley, "their beauty was beyond description. Never before was there such a blaze of rich colors, delicate tints, and magnificent vegetation assembled. The great table on which the Chinese Azaleas and Cacti were assembled was a pyramid of flame, and the exhibition of Orchids alone was forty-eight yards long, in a double bank; nor was there a bad specimen among them."

PRESERVING POLLEN.—M. H. Haquin, a zealous and intelligent horticulturist at Liege, has succeeded perfectly in impregnating lilies with pollen kept for forty-eight days; the Azalea, with pollen kept forty-two days; and, what is still more surprising, the Camellia has borne perfect seeds when the pistils were fertilized with pollen, gathered sixty-five days previously. M. Haquin has now fine hybrid seedlings from these plants, to the flowering of which he is anxiously looking forward.

As soon as the blossoms open, M. Haquin cuts off the pollen, (anthers,) and treats it in the following manner: "I cut off the stamens as soon as I see them, put them in a paper packet closely pasted, and place the packet for twenty-four hours in a warm and dry place. At the end of this time, the pollen dust is perfected. I then take the pol-

len out of the paper packet, and put it in another, made of very thin sheet lead. Afterwards, I place this in another paper packet, label it, and put the whole away in a place that is cool but not moist." —*Revue Horticole.*

M. Haquin adds that he has the pollen of the Azalea and Camellia, preserved in this manner, with which he intends to fertilize the blossoms of *the ensuing year*. The fact of being able to preserve pollen, is one highly interesting to all amateurs who desire to raise new varieties, whether of flowers or fruit, by *crossing* or hybridizing; since it often happens that the plant to be fertilized blooms too early or too late, for the blossoms of the male parent. Or perhaps the sort to be fertilized, may be in one place, and the one which we desire to fertilize with, may be in another an hundred miles off. It is easy to see, that since it is found that pollen may be preserved, this is of no moment. The pollen may be gathered when scarcely mature, and kept for days or weeks; and it may be sent by mail from one part of the country to another.—*Horticulturist.*

Earthing up Potatoes.—On this subject, Mr. C. W. Johnson says:—"I have long had doubts relative to earthing up potatoes being a beneficial practice, and now I am convinced that it is detrimental. The variety employed in my experiments are the Pink Kidney; all the sets are planted at the same time, (the first week in April,) in rows two feet apart, and eighteen inches in the rows; and were taken up September 24th, and weighed. The average of all my experiments gives exactly *an increase of one-fourth in favor of not earthing up*; but some of the plants gave still more, viz: as 42 lbs. is to 31¼ lbs. The experiment has been made on the sixteenth of an acre of good deep loam, with a cool, moist subsoil."—*Annals of Hort.*

Camelia Japonica.—Of the many ways of propagating this plant, few succeed better, for a new and dear variety, than that we should call *budgrafting*. This used to be done by Messrs. Brown of Slough, very generally, and with good success; every bud, with the smallest portion of wood attached, made a plant. The stock was cut down to within two inches of the surface, and the small piece of wood, with the bud attached, grafted on the top. Many ways may be employed to join these, and the only necessary precautions are, first, to leave a bud at the top or highest point of the stock itself, and to insert the graft so as to bring down the bud in it below the level of that of the stock, but on the opposite side. Whether this is by a sloping cut, (splice-grafting,) or by notching the stock and placing the graft on a wedge, (cleft-grafting,) or by saddle-grafting, it matters not. A good fit is necessary, and the barks of the stock or graft, must exactly meet on one side, at the least, and by these means you may make a plant of every leaf or eye.—J. W. *Gardener's Gaz.*

Mr. Fortune.—Two years ago, the London Horticultural Society, with praiseworthy enterprise, despatched Mr. Fortune to China, for the special purpose of making collections of all the most interesting trees, shrubs and plants, cultivated in that country, and which, previous to the late treaties, were not to be obtained by foreigners. We perceive it is now announced that he has just returned to England. His collections, *in eighteen glazed cases*, have arrived in beautiful condition, and will be put in course of culture at the Society's garden. The gardening world look forward with great interest to the results of this collection. The Chinese are the most patient and skilful of merely practical gardeners. Their double flowers are strikingly beautiful; and some of their fruits—as for example, the peaches of Pekin, are represented as of extraordinary size and excellence. The climate of a considerable part of China is so similar to that of this country, that many of its trees and shrubs prove perfectly hardy here, as for example the Chinese Magnolia and Wistaria.—*Horticulturist.*

Weigela Rosea.—This is one of the new plants sent home a year ago by Mr. Fortune, to England, from China. Its appearance in the Society's garden, is thus noticed in the Gardener's Chronicle:—"In the adjoining garden was a fine plant of *Weigela rosea*, sent home from the north of China. It has the appearance of a Syringa, (*Philadelphus*) with opposite, and nearly sessile leaves, of about three inches in length; and monopetalous tubular flowers of a delicate rose color, hanging in loose clusters of from three to five at the end of every little side branch. This valuable acquisition to our gardens, has hitherto been kept under glass; but it is not improbable that it may yet turn out to be hardy. In the house recently erected in the hardy department, a thriving specimen of *Calystegia pubescens* will soon be in flower. This was sent from Shanghai, by Mr. Fortune, under the name of a *Double Convulvulus*, and is the first plant of its order that has been mentioned as producing double flowers. The latter are of a delicate pink color. If it should prove hardy, it will be a valuable addition to plants of that kind."

New Tree Pæonias.—One of the hardiest and most magnificent of shrubs in this climate is the Chinese Tree Fæony.

We are therefore highly gratified to learn that Professor Jackson, of Schenectady, (whose unique garden near Union College is the cynosure of all eyes turned thitherward,) has succeeded in raising from the seed some remarkably fine new varieties of this plant, which are likely to surpass in beauty any of the Chinese species or the European seedlings from them.

Among these we learn there is one bearing large, perfectly double, *pure white* flowers, resembling those of the herbaceous *P. whitleji*. This will be a great acquisition to all gardens. Several others are novel in color, double, and of handsome habit of growth, etc. Among them is a flesh colored variety; another with pink petals; another nearly full double with the purple stripe of *Papveracea*—and still another of a very *pale orange*. And these are only a portion of Professor J.'s promising seedlings. As soon as another blooming season is past, we are to have a full account of these really most valuable acquisitions.

We learn that the parent of all these seedlings, is the Chinese poppy-flowered Chinese Tree Pæo-

ny (*P. papaveracea,*) the single species well known in our gardens. This tendency, which it shows, to run into new double varieties, is a most valuable one to the horticulturist—and since the plant is so well suited to our climate we cannot too strongly recommend the sowing of the seeds with a view to originating a great number of charming sorts. Fertilizing with the pollen of the sweet scented Chinese herbaceous sorts, (*P. fragrans,*) we may probably obtain a hybrid that, to the splendid large flowers of this shrub, shall add all the fragrance of the rose.

The seeds of the Tree Pæony do not germinate till the second year, if planted in the spring, or even later in the autumn. When planted as soon as they are ripe, they will however mostly germinate in the ensuing spring. Nothing is more simple than their after culture. They absolutely require nothing but good garden soil, and an open airy exposure. The *deeper* the soil the taller and stronger will be the growth of the shrub.—*Horticulturist.*

ON THE USE OF LEACHED ASHES.

Mr. Editor:—I have just received your April No. of the Cultivator, in which you wish, for the benefit of one of your correspondents, H. C. B., some information on the value of ashes, &c., and call upon "chemists to tell." Not being exactly a chemist myself, yet having *dug* into the science a little, for the purpose of assisting me in my farming operations, I will offer a few remarks.

Wood ashes, as you observe, generally do best on rather light soils; if they are applied in large quantities, either leached or unleached, they have a tendency to bring in the red moss; but upon gravelly soils this may not be detrimental, as they are usually dry and warm enough if there is moss. But upon more moist and close soils, ashes may ultimately prove injurious.

Unleached ashes when first applied to grass, or other crops, are more efficient than leached, owing to the greater amount of Alkali, or potash they contain, but I do not think the sowing of unleached ashes upon land the most economical way of using them. If a heavy rain immediately follows, the potash is mostly washed out and carried off the land, or sinks into the soil beyond the reach of the roots of plants Common potash is very readily dissolved in about its weight of water. If a farmer wishes to apply unleached ashes to his grass, or grain crops, it would be the better way to mix his ashes quite moist with ground gypsum, and let them remain some time in the heap. The potash of the ashes would decompose the gypsum, and sulphate of potash would be formed. Sulphate of potash is much less soluble than carbonate of potash, as it requires sixteen pounds of water (at the temperature of 60°) to dissolve one lb. of sulphate of potash. From this fact, the loss of potash by rains would be likely to be much less, and for clover, cabbages, turneps, radishes, the sulphate is decidedly better than the carbonate of potash.

But I think it a much more economical plan to mix ashes with swamp muck, peat, or decaying vegetable matter from the woods. All these substances are acid; (decomposing vegetable matters always produce acids;) these acids want neutralizing before the muck, &c., are suitable for most crops, (sorrel excepted.) Frequently swamp muck is saturated with sulphate of iron, or alumina, that has oozed out in the water from higher land. In such cases, the ashes will have the direct effect to neutralize the acidity of the muck, and make it a good manure.

There is, after the usual process of leaching ashes for soap or potash, a certain quantity of potash left in the ashes, in combination with silex. Dr. Dana says there are fifty pounds of potash in a cord of leached ashes. Exposure to the air decomposes this, and then another portion of alkali can be extracted by water. This partially explains what you have heard of the Long Island farmers, who "consider the leached ashes as good as the unleached, provided they are not used for some time after being leached." And you further say, "some suppose they attract valuable properties from the atmosphere after coming from the leach-tub. Is it so? and if any, what are the properties acquired?"

In answer to your question, I say yes, it is so, and will explain it.

If a quantity of leached ashes are piled up under cover of a shed exposed to the air, another portion of alkali will be set free by the decomposition of the silex, as before stated, and the alkali has a strong affinity for nitric acid. The air we breathe is mostly composed of nitrogen seventy-nine parts, and twenty-one parts of oxygen; in these proportions, these two gases are mechanically combined. But by well known chemical laws, these two gases chemically combine in several different proportions, and from very different substances from common air. In one of their chemical combinations, they unite in the proportions of fourteen parts nitrogen and forty parts oxygen, and in these proportions it is nitric acid, and mixed with a certain quantity of water, it becomes *hydro*-nitric acid, or aquafortis. If common pot or pearlash is dissolved in aquafortis, and the liquid evaporated, the result will be nitre or saltpetre. But this is an artificial way of making saltpetre—and expensive, too.

Nature takes a somewhat different method. As before stated, the alkali in the leached ashes, has a strong affinity for nitric acid, and so strong is that affinity, or attraction, that the nitrogen and oxygen of the atmosphere, will, *very accommodatingly*, chemically combine in the *right* proportions to form nitric acid, which readily unites with the alkali, and forms nitre or saltpetre—naturally, and cheap too. The longer the ashes are kept, and occasionally moistened and shovelled over, the greater the accumulation of nitre. But if the ashes are occasionally wet with urine, drainings from the manure heap, or mixed with night-soil, or decaying animal matter—substances all rich in nitrogen—the process will be much hastened, and the accumulation of nitre much greater in a given time. Perhaps twelve months would be a proper time for the ashes to remain.

A similar process is going on under all houses and other buildings; the potash in the felspar and mica of our soils, is being slowly but continually dissolving, and as there is also a continual ascent of water, by evaporation, each particle of water as it ascends, brings with it its particle of potash, which is returned in the dry surface soil, which combines with the nitric acid. And there are

frequently large accumulations of nitre under old buildings. In some parts of the East Indies, where it seldom or never rains, nitre accumulates (as under buildings here,) in such quantities that the soil is shoveled up and leached, as we do ashes, and boiled down to nitre.

Nitrate of lime is formed in vast quantities in the lime caverns of Kentucky. And the dry plains in the province of Arica in Peru, are covered with an incrustation of nitrate of soda.

Every body knows, or ought to know, that saltpetre is a good manure—though perhaps they do not all know why it is so. Possibly I may continue the subject, but my sheet is full at this time.

WARNER, N. H. April 20, 1846. L. B.

Albany Cult.

REPORT

On the Cultivation of the Strawberry.

MADE JUNE 13, 1846.

The Committee appointed two years ago, at the request of N. LONGWORTH, Esq., to investigate the character and habits of the Strawberry, having had the subject under consideration, beg leave to report:

That after the numerous experiments made by the members of the Committee, relative to the character of the plant, and its productive qualities, they have unanimously arrived at the following conclusions:

1. That Strawberry plants raised from seed, like many other plants, are liable to run into diversified varieties, and a peculiarity in these varieties, is the irregularity of the reproductive or sexual organs.

2. That a few varieties have the flowers perfect in the sexual organs, and present the stamens and pistils both fully developed in each flower. Such flowers may produce a good crop of medium sized fruit, as we have witnessed this season, in the cultivation of the La Grange, (a variety of the Haut Bois,) in the White Pine, and in the Monthly Alpine.

3. Another class, which is numerous and embraces the best varieties cultivated in this neighborhood, has the female or pistillate organs fully developed, and the male or staminate organs so imperfect, that at first glance they appear to be wanting; but a critical examination and dissection of the flower will disclose them, few in number, and so imperfect in anthers and pollen, that they appear incapable of fertilizing the stigmas; consequently, they are termed pistillate or female plants, and require a staminate plant near them to furnish the fertilizing powers; for without staminate plants, the crop will be small, and the berries imperfect. Hovey's Seedling plant will illustrate this class.

4. Other varieties are perfect in the male or staminate organs, with the pistils imperfect. Such plants will produce an imperfect crop, although some flowers may have perfect pistils, and produce the berries of large size; but under the most favorable circumstances they will fail to mature an abundant crop of fruit.

It may be proper here to state, that these varieties have a strong growth, producing vigorous runners, and when planted with pistillate plants, within two or three years, they occupy all the ground, and the cultivator, who is ignorant of their habits, generally concludes that his productive plants have become barren; when, after proper examination, he would see that the pistillate plants had been displaced by the rapid growth of the staminates, and the quantity of fruit proportionately diminished.

5. There are other varieties so defective in pistils or female organs, as to be completely sterile, and fail to produce fruit, either in their native state or under the most careful cultivation.

A majority of the Committee also express the opinion, that the varieties mentioned never change their character, so as to be transferred from one class to another, but continue their original distinction in the runners, and remain the same under all circumstances of cultivation.

The minority of the Committee think that sufficient experiments have not yet been made, to demonstrate fully the truth of this opinion.

Your Committee, therefore, relying upon their own experiments, and those made by other cultivators, freely state, that to insure an abundant product of large fruit, the principle of hybridizing must be adopted, and such varieties selected to bear fruit, as exhibit the female organs, or pistils, largely developed, with the male organs, or stamens, defective or undeveloped. To fertilize the female plant with the necessary pollen, the pistillate plants must be accompanied in the same bed, or near to it, with male or staminate plants.

This rule being strictly observed, in all favorable seasons abundant crops will reward the careful cultivator.

As further evidence that this is the most successful mode for the cultivation of the Strawberry, your committee beg leave to refer to the quantity of Strawberries sold in the Cincinnati market this season, which were furnished principally by those who have adopted the system of planting female, or pistillate plants, with a proportion of about one-tenth male or staminate plants for fertilizing.

The amount sold has been ascertained by a Committee appointed by the Horticultural Society. The Committee reported the quantity in market each day during the most productive portion of the Strawberry season, commencing on the 19th of May and ending on the 12th of June—a period of 22 days—in which time they state the aggregate amount at 4,150 bushels, being an average of nearly 200 bushels per day. Other estimates make the quantity much greater.

This product of fruit, compared with other markets, and the quantity of ground cultivated, furnishes conclusive evidence of the success in attending to the cultivation of staminate and pistillate varieties.

JACOB HOFFNER, jr.
Minority on 5th position.
WILLIAM SMITH,
R. BUCHANAN,
GEORGE GRAHAM,
A. H. EWING,
A. H. ERNST,
J. G. ANTHNOY,
Minority on 5th division.
S. MOSHER,
S. S. JACKSON,
Committee.

Cincinnati, June 13th, 1846.

REPORT

Of the Committee of the Cincinnati Horticultural Society, on the Statistics of the Strawberry, and the quantity sold in the Cincinnati market, for the year 1846.

May 19th	10	bushels.	June 1st	100	bushels.
20th	20	"	2d	300	"
21st	20	"	3d	300	"
22d	25	"	4th	300	"
23d	55	"	5th	300	"
25th	20	"	6th	350	"
26th	250	"	8th	100	"
27th	200	"	9th	350	"
28th	200	"	10th	300	"
29th	250	"	11th	250	"
30th	300	"	12th	150	"

Total, for 22 days, 4,150

D. C. CADY, *Chairman.*

STRUCTURAL BOTANY,

Applied to Horticulture---Seed.

The seed is the ovulum arrived at perfection.

It consists of various coverings enclosing an *embryo*, being the granule of pollen deposited there, which is the rudiment of a future plant.

The seed is nourished by the same means as the fruit; and, like it, will be more or less perfectly formed, according to the abundance of its nutriment.

The plant developed from the embryo in the seed, will be in all essential particulars like its parent species, unless its nature has been changed by hybridising.

But although it will certainly, under ordinary circumstances, reproduce its species, it will by no means uniformly reproduce the particular variety by which it was borne.

So that seeds are not the proper means of propagating varieties.

Nevertheless, in annual or biennial plants, no means can be employed for propagating a variety, except the seeds; and yet the variety is preserved.

This is accomplished solely by the great care of the cultivator, and happens thus.

Although a seed will not absolutely propagate the individual, yet as a seed will partake more of the nature of its actual parent than of anything else, its progeny may be expected, as really happens, to resemble the variety from which it sprung, more than any other variety of its species.

Provided its purity have not been contaminated by the intermixture of other varieties.

By a careful eradication of all the varieties from the neighborhood of that from which seed is to be saved, by taking care that none but the most genuine forms of a variety are preserved as seed-plants; and by compelling by transplantation a plant to expend all its accumulated sap in the nourishment of its seeds, instead of in the superabundant production of foliage, a crop of seed may be procured, the plants produced by which will, in a great measure, have the peculiar properties of the parent variety.

By a series of progressive seed-savings upon the same plan, plants will be at length obtained, in which the habits of the individual have become as it were fixed, and capable of such exact reproduction by seed, so as to form an exception to the general rule; as in turneps, radishes, &c.

But if the least neglect occurs in taking the necessary precautions to ensure a uniform crop of seed, possessing the new fixed properties, the race becomes deteriorated, in proportion to the want of care that has occurred, and loses its characters of individuality.

In all varieties those seeds may be expected to preserve their individual characters most distinctly which have been the best nourished; it is, consequently, those which should be selected in preference for raising new plants, from which seed is to be saved.

When plants have been propagated for a series of years by suckers alone, which are adventitious buds arising from the root, their power of producing seed seems somewhat impaired, this is the case with many herbaceous plants and bulbs, but if a single seed be found by which to raise a new plant, a faculty of bearing seed becomes renewed.

When seeds are first ripened, their embryo is a mass of cellular substance, containing starch, fixed carbon, or other solid matter in its cavities; and in this state it will remain until fitting circumstances occur to call it into active life.

These fitting circumstances are, a temperature above freezing point, a moist medium, (earth) darkness, and exposure to air.

It then absorbs the moisture of the medium in which it lies, decomposes water from which it inhales oxygen, and undergoes certain chemical changes; its vital powers cause one extremity of it to ascend for the purpose of finding light, of decomposing its carbonic acid, by parting with its accumulated oxygen, and forming leaves and branches, and the other extremity to descend for the purpose of finding a constant supply of crude nutriment and becoming roots.

Unless these conditions are maintained, seeds cannot germinate; and, consequently, an exposure to light is fatal to their embryo, because oxygen will not be absorbed in sufficient quantity to stimulate the vital powers of the embryo into action, for the purpose of parting with it again, by the decomposition of the carbonic acid that has been formed during its accumulation.

The length of time which seeds preserve their power of growing, or vitality as it is called, differs in different plants. Some lose their vitality in a single year, others preserve it for many years —the best authenticated account of this latter power is of some raspberry trees now growing in the garden of the Horticultural Society of London, which were raised from seeds taken out of the stomach of a skeleton found in one of the tumuli or ancient tombs at Dorchester, England, *thirty feet below the surface.* With the skeleton were found some coins of the Emperor Hadrian — so that they must have been sixteen or seventeen hundred years old. The raspberry has also vegetated from seeds taken from raspberry jam, in this case they must have borne the heat of cooking for a length of time. This plant, as is well known, is a native of the colder parts of this continent; the integuments or coverings of the seed must therefore have been formed with wonderful powers of protection against extremes of heat, cold, and age.

Pine seeds and many others vegetate very rap-

idly in lime just slacked. This action produces warmth, and the lime immediately attracts the excess of carbonic acid from the seed, this, as before observed, being one of the chief conditions of vegetating.

The business of saving seed for gardens as a trade, is quite new in this country, and many hundred dollars are annually expended in importing seeds from Europe. The vitality of some is injured by the voyage.

It will be seen by the foregoing information that it would be useless to compete with European seedsmen, unless this branch were followed as a business, so much attention, so many precautions are requisite to procure true, full, and plump seeds of vegetables and flowers. But it is equally certain if this atfention were paid so as to ensure an infallible character after proper trials to the seeds grown, that the alpine purity of the atmosphere, the quantity and intensity of solar light, by ripening all the juices, and particularly the pollen of plants, would enable the seed-growers of this country to excel by far those of Europe.

But unless done thoroughly, it is no use to make the attempt, as a grower once disappointed in the quality of his seed will scarcely ever try again.—*Testemacher's Elm. of Hort.*

Superior Mode of Curing Hams.—Agreeably to your request I herewith send you the process of curing the hams I sent you in March, which called forth the admiration of the American Agricultural Association, and the Farmer's Club, at New York.

I made a pickle of two quarts of salt, to which I added one ounce of summer savory, one ditto sweet marjoram, one ditto allspice, half ditto saltpetre, and one pound brown sugar: boiled all together and applied the mixture boiling hot to one hundred pounds of hams, and kept them in the pickle three or four weeks.

My process of smoking was not the most expensive, but may not be the less available on that account. I smoked the hams in a seed cask, with one head in, with a small hole for the smoke to pass out, hung my hams to the head, and used about a peck of mahogany sawdust for fuel, which I happened to have on hand for packing goods. I smoked but one week. W. S.

Boston, May 6, 1846.—*Am. Ag.*

Astringent Mixture for Scours.—Suet cut fine and boiled in new milk, in the proportion of one quarter of a pound to a pint of the milk. To this must be added of boiled starch, one pint; alum, in powder, one drachm. Given as a drench. Good both for horses and cattle.—*Brit. Amr. Cult.*

To prevent Horses being teased by Flies.—Take two or three handfuls of walnut leaves, upon which pour 2 or 3 quarts of cold water; let it infuse one night, and pour the whole, next morning, into a kettle, and let it boil for a quarter of an hour; when cold it will be fit for use. No more is required than to moisten a sponge, and, before the horse goes out of the stable, let those parts which are most irritable be smeared over with the liquor, viz: between, and upon the ears, the neck, the flank, &c. Not only the lady or gentleman who rides out for pleasure, will derive benefit from this preparation, but the coachman, the wagoner, and all others who use horses during the hot months.—*British Am. Cult.*

Liniment.—I send you a recipe for a liniment, which has been long in use, and has been found highly efficacious in all cases of sprains, bruises, and wounds, external or internal, on man or beast. It has been used with great success in severe cases of rheumatism, often effecting a positive cure, and no farmer should be without it who has not something better to substitute in its place.

One-half oz· spirits hartshorn;
Two oz. camphor gum;
One gill spirits turpentine;
One-half pint sweet oil;
One pint alcohol.

Shake it well together, and apply, rubbing it in smartly with the hand.—*Alb. Cult.* Junius.

Boys that have been properly reared, are men at sixteen; while those that have been brought up in idle habits, are nuisances at twenty-one.

CONTENTS OF THIS NUMBER.

Western Far. and Gard. Almanac, New Publications, - - - - - - 225
A Lucky Editor, Wake up, Friends; Grapes; Insects; Reproachful Names, - - 226
The Nursery Business, - - - - - 227
Laying down Land to Grass, - - 228, 229
Slitting the Bark of Trees - - - 230
Suckatash, or Corn and Beans, - - 231
Letters of a Cosmopolite, No. 11, - - 232
Manure for Particular Crops—Enquiries; Flax; Grape Culture; Botts, Sweeny and Galls, - - - - - - - - 233
Just Pride; Cultivation of the Cranberry; A Preventive to Mildew in the Gooseberry, - - - - - - - - 234
How to raise Giant Asparagus; To Destroy Slugs; London Horticultural Society; Preserving Pollen, - - - - - 235
Earthing up Potatoes; Camelia Japonica; Mr. Fortune; Weigela Rosea; New Tree Pæonias, - - - - - - - 236
On the Use of Leached Ashes, - - 237
Report on the Cultivation of the Strawberry, - - - - - - - - 238
Report on the Statistics of the Strawberry at Cincinnati; Structural Botany, 239
Superior Mode of Curing Hams; Astringent Mixture for Scours; Liniment; To Prevent Horses being teased by Flies, - 240

TERMS.—*The* Farmer and Gardener *is published* semi-monthly, *each number containing Sixteen royal octavo pages, at* one dollar *per annum per copy;* seventy-five cents *per copy for Four and less than Ten copies; and* fifty cents *for Ten or more copies to the same Post Office. All subscriptions* in advance.